



ALJ/RIM/mef 9/9/2021

FILED

09/09/21
01:13 PM

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769.	Rulemaking 14-08-013
And Related Matters.	Application 15-07-002 Application 15-07-003 Application 15-07-006
(NOT CONSOLIDATED)	
In the Matter of the Application of PacifiCorp (U901E) Setting Forth its Distribution Resource Plan Pursuant to Public Utilities Code Section 769.	Application 15-07-005
And Related Matters.	Application 15-07-007 Application 15-07-008

**ADMINISTRATIVE LAW JUDGE'S RULING
ORDERING REFINEMENTS TO LOAD
INTEGRATION CAPACTIY ANALYSIS**

Summary

This *Ruling* orders refinements to the Load Integration Capacity Analysis (ICA) that will be made by the Investor-owned Utilities (IOUs), Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E). Specifically, this *Ruling* addresses

the proposed refinements to modeling changes to the ICA, reporting and collaboration efforts of the IOUs, data inaccuracies between the Uniform Load Results and Grid Need Assessments, and minor modifications proposed by the IOUs.

1. Background

In January 2021, I issued my Ruling (*January Ruling*) ordering refinements to the ICA and required the IOUs and encouraged stakeholders to “file and serve proposals for Uniform Load refinements” within 120 days of the *January Ruling*’s issuance. Pursuant to the *January Ruling*, the IOUs developed a description of the Uniform Load methodology, inputs and assumptions, hosted a workshop to define the use case of the Uniform Load results and determine what modifications are necessary to refine the Uniform Load analysis to provide results that are useful for customers evaluating locations to interconnect new load. Stakeholders then filed proposals on May 28, 2021, to refine the uniform load results.¹ On August 10, 2021, the IOUs filed a Joint Motion requesting an opportunity for stakeholders to file reply comments on party proposals. The Joint Motion was granted and the IOUs each filed reply comments on August 27, 2021.

In a related and parallel track, the *January Ruling* ordered the IOUs to hire an independent technical expert (“ITE”) to review the IOUs’ ICA data validation plans (for both generation and load ICA) and ordered the IOUs to submit improved data validation plans via Tier 1 Advice Letters. The *January Ruling* also ordered the contracted expert to submit a report to Energy Division

¹ The IOUs filed a joint proposal and the Public Advocates Office (Cal Advocates), California Energy Storage Association (CESA), Interstate Renewable Energy Council (IREC) Green Power Institute (GPI) and the Advanced Energy Economy (AEE) each filed individual proposals to refine the load results within the ICA.

reviewing the IOUs' improved data validation plans, areas for improvement, and sufficiency of data validation efforts. Several parties protested the ICA Data Validation advice letters and Energy Division suspended the advice letters. The IOUs requested and the Energy Division agreed to allow the IOUs to submit supplemental advice letters that further responded to recommendations of the ITE for improvements to data validation.

Given the development of these efforts in the record, this *Ruling* addresses improvements for the IOUs to make on Load ICA in the near term and does not address the IOUs ICA Data Validation plans.

2. Discussion

Based on party comments, it is evident that more work needs to be done to improve the ICA's Uniform Load results to ensure the data being provided is accurate and useful to site new load on the grid, especially as it relates to transportation electrification. The IOUs agree in their proposal that load ICA results can assist customers in identifying locations for electric vehicle charging stations and that inaccuracies within the ICA should be addressed. GPI's proposal notes that further progress is needed to ensure the ICA, including the Uniform Load component, can "support existing and needed use cases."² CESA offers that the load ICA could "evolve to provide more than just static guidance and instead provide forward-looking guidance as well as more definitively support project investment decisions."³ AEE's proposal points out that a useful ICA provides benefits to all DER providers, and discusses how load "ICAs are

² Comments of the GPI on the Uniform Load ICA and IOU workshop presentations, at 1.

³ Proposal of the California Energy Storage Alliance in response to the Administrative Law Judge's (ALJ's) ruling, at 2.

particularly germane to EVSE deployment.”⁴ Cal Advocates continue “to support refinements to the ICA to reduce ratepayer costs by improving the transparency of the hosting capacity estimation process and enhancing the efficiency of DER interconnection.”⁵ IREC’s comments reinforce that the “ICA’s Uniform Load results should be useful to guide the placement of new load, *e.g.*, electric vehicle chargers, battery storage, and the electrification of buildings and displacement existing natural gas infrastructure, on the IOUs’ distribution systems.”⁶

Stakeholders made proposals about the use-case for load ICA and other ICA refinements. The parties agree that some ICA refinements are best addressed in Rulemaking (R.) 21-06-017. While some remaining ICA issues are best addressed in Track 2 of R. 21-06-017, there are other proposals that can be immediately adopted to prevent any further delay in making continuous improvements to the ICA.

Some of the proposed refinements not addressed in this *Ruling* include (1) IREC’s proposal to order the IOUs to use the same assumptions for the load ICA or GPI’s proposal to add a median Uniform Load ICA (864 h profile) to enhance uniform load use cases; (2) Cal Advocates’ proposal to determine metrics to evaluate accuracy for the load ICA; (3) AEE’s proposal that the “IOUs take a reserved approach to estimating available ICA capacity by including new known load projects in their analyses” of ICA;⁷ and (4) PG&E and SCE’s recommendations that any ruling or decision ordering ICA refinements clarify

⁴ Proposal of AEE to refine ICA in response to the ALJ’s ruling, at 3.

⁵ Proposal of the Public Advocates Office on refinements to the Load ICA, at 2.

⁶ IREC, inc.’s proposals for refinements of the load ICA, at 2.

⁷ Proposal of AEE to refine ICA in response to the ALJ’s ruling, at 5.

“that such costs should be tracked within the DRPMA and that IOUs may seek recovery of those costs in a subsequent General Rate Case (“GRC”).⁷ Where this *Ruling* does not specifically address a proposed refinement, the silence on that matter does not denote the Commission’s support either way of the proposal, nor does the silence exclude the proposal from consideration in R. 21-06-017.

2.1. Discrepancies in ICA Uniform Load Results and Grid Needs Assessment

The IOUs’ Joint Proposal asserts that “the Grid Needs Assessment (“GNA”) can be used in conjunction with the load ICA to allow users to roughly gauge how much additional capacity for load exists on each distribution circuit and substation or bank over the five-year forecast horizon.”⁸ However, Cal Advocate and IREC’s proposals call attention to the divergent results between the ICA Uniform Load and the IOUs’ GNAs. For instance, IREC’s proposal explains that “PG&E’s GNA described capacity-related grid needs on only 6 percent of its circuits in 2018, and SCE’s GNA described the same on only 11.4 percent of its circuits in 2018.”⁹ IREC proposes that this “highlights the need to investigate whether the Uniform Load results accurately reflect the available capacity for new load.”¹⁰ Cal Advocates’ proposal discusses that “IREC and the California Energy Commission (CEC) found that in 2019 and 2020, 63 percent and approximately 30 percent of circuits, respectively, PG&E’s ICA map showed zero load capacity compared to 6 percent in its GNA for these two years.”¹¹

⁸ Joint IOU Uniform Load ICA proposal of PG&E (U39E), SCE (U338E), and SDG&E (U902E), at a-1.

⁹ IREC, inc.’s proposals for refinements of the Load ICA, at 4.

¹⁰ *Id.*

¹¹ Cal Advocates proposal, at 3.

Uniform Load Results should be useful to site new load on the grid. To achieve this, ICA load results must be reliably accurate and provide ICA users with more than a mere gauge to site new load. Though the GNA and Distribution Deferral Opportunity Reports (DDOR) can be useful tools when combined with the ICA for users to “identify locations and capacity that are likely to be available to connect new load while minimizing the likelihood of triggering distribution infrastructure upgrades beyond what is already planned,”¹² this does not mean that ICA load results can be used independently to site new load like electric vehicle charging stations. As PG&E and SCE are supportive of conducting further investigation of this issue, this Ruling orders the IOUs to conduct further analysis to address the divergence between the GNA and ICA results.

Accordingly, this *Ruling* orders the IOUs to adopt Cal Advocates proposal to review the ICA and the GNA assumptions and methodologies to provide the Commission and parties with a report by February 2022, that discusses whether alignment of such assumptions and methodologies could improve ICA results. Also, as proposed by GPI, this report shall provide an updated Uniform Load ICA method summary that identifies any new data validation methods and propose methods (including quantitative metrics) to develop descriptions of Load ICA accuracy.¹³

2.2. ICA Refinement Reporting Requirements

IREC, Cal Advocates, and AEE recommend that the IOUs be required to submit regular updates to the Energy Division and stakeholders outlining ICA

¹² Joint IOU Proposal, at A-1.

¹³ GPI Comments, at 2.

improvements and challenges. For example, AEE specifically requests that, at a minimum, the IOUs be required to provide:

1. “A description of the issues and challenges associated with refining load ICAs;
2. A description of proposed solutions to overcoming the identified challenges with refining load ICA and timeline for implementing proposed solutions;
3. A description of the progress made toward addressing challenges with load ICAs and aligning methodologies; and
4. An updated table of aggregated load ICA results, similar to that which the Interstate Renewable Energy Council (IREC) requested from the utilities on May 4, 2021.”¹⁴

In addition to those requirements, IREC proposes that the monthly reports include:

1. The timeline for implementing the solutions identified;
2. Progress to date implementing the solutions identified; and
3. An updated table of aggregated Uniform Load results, similar to that which IREC requested from the utilities on May 4, 2021 and provided in Attachments 1-3 to these comments.”¹⁵

The IOUs oppose stakeholder proposals requiring the filing of regular updates. SDG&E asserts in its reply comments “that filing regular updates on ICA refinements would be burdensome and is unnecessary”¹⁶ since “any

¹⁴ Proposal of AEE to refine ICA in response to the ALJ’s ruling, at 6.

¹⁵ IREC, inc.’s proposals for refinements of the Load ICA, at 6.

¹⁶ Reply comments of SDG&E (U902E) on party proposals regarding Uniform Load ICA refinements, at 3.

stakeholder, including the CEC, can already view the date when ICA values are updated on the existing DRP portal.”¹⁷

The pace of improvements being made to the ICA continues to lag and additional transparency into the IOUs’ ICA improvements effort will help to accelerate ICA improvements. However, the need for monthly reports is not necessary as IREC’s proposal calls for. Instead, this *Ruling* requires, beginning in the 4th Quarter of 2022, that the IOUs submit an “ICA Refinements Annual Report.” The report shall include the following:

1. A description of the issues and challenges associated with refining load ICAs;
2. A description of proposed solutions to overcoming the identified challenges with refining load ICA and timeline for implementing proposed solutions;
3. A description of the progress made toward addressing challenges with load ICAs and aligning methodologies;
4. The timeline for implementing the solutions identified;
5. Progress to date implementing the solutions identified;
6. An updated table of aggregated Uniform Load results, similar to that which IREC requested from the utilities on May 4, 2021; and
7. A summary of IOUs coordination efforts with the CEC to coordinate with the California Energy Commission (CEC) on ICA tool updates to facilitate timely updates to the CEC’s EDGE tool. This report shall be provided to the Energy Division and to the lists Energy Division identifies. This report will remain a requirement until Energy Division or the assigned ALJ terminates it.

Moreover, despite the IOUs opposition to hosting additional ICA workshops, this *Ruling* partially adopts IREC’s proposal to require the IOUs to

¹⁷ *Id.*

host regular ICA workshops.²² This *Ruling* orders the IOUs, in the 4th Quarter 2022, to host a public workshop for interested stakeholders to review the topics identified in the ICA Refinements Annual Report, and provide stakeholders with the opportunity to discuss with the IOUs and Energy Division the adequacy of the IOUs' progress. Scheduling of this workshop shall be made in coordination with Energy Division employees working on the High DER OIR to align with the related High DER studies which include "the DRP Data Portals Improvement Report."

2.3. Minor Modifications Proposed by the IOUs

In the Joint IOUs' proposal, the IOUs recommend the following modifications below to align planning assumptions in load ICA to further improve its usefulness:

1. "PG&E: Decrease the lower limit of the Steady State Voltage Criteria from 119 V to 118 V;
2. 2. SCE: Increase the lower limit of the Steady State Voltage Criteria from 114 V to 118 V; and
3. SDG&E: Integrate anticipated known loads at specific locations."¹⁸

Given that the IOUs have identified these minor modifications as ways to improve the usefulness of the ICA data this *Ruling* orders each IOU to implement their respective modifications within 120 days of this *Ruling*.

2.4. ICA Modeling Refinements

Stakeholders submitted their proposal to improve Load ICA modeling in a way that makes the results more useful for locating EV chargers. PG&E is supportive of implementing several aspects of stakeholders' modeling proposals,

¹⁸ Joint IOUs' Proposal, at A-1.

that will increase the usefulness and accuracy of ICA.¹⁹ SCE is also supportive of making key changes to ICA inputs including models, and profiles.²⁰ Despite the IOUs willingness to make modeling changes to refine the ICA, SCE states that it is "unable to implement major ICA refinements until many of the software solutions themselves are implemented."²¹ SCE also states that a final implementation date for new modeling and profile refinements can't happen until the end of 2026.²² Both PG&E and SDG&E are supportive of some of the party proposals on Load ICA modeling refinements, however, they provided no timeline for implementation and suggested that these items be further addressed in R. 21-06-017.

It does appear that modeling changes to Load ICA will require a significant amount of time to implement, but the timeline should be accelerated wherever possible. SCE's 2026 time frame is too late for Load ICA to make an impact on siting load such as TE. To prevent any further delay in implementing proposals that are generally supported by the IOUs, this *Ruling* orders the IOUs to begin adopting the following modeling changes to Load ICA:

1. Model load ICA with all queued load projects and planned, known, near-term distribution system project;
2. Model load ICA to include distribution system upgrades with an approved construction schedule and an in-service date within one year;
3. Model load ICA to consider forecasted DER growth;

¹⁹ Reply comments on ICA refinements proposals by PG&E (U39E), at 3.

²⁰ SCE's (U338E) reply comments on party proposals regarding ICA refinements submitted on May 28, 2021, at 3-4.

²¹ *Id.*, at 3.

²² *Id.*

4. Model load ICA to consider planned network reconfiguration; and
5. Model load ICA with load forecast for the next year.

Given the draft scope related to ICA improvements in the HIGH DER OIR and considering that the Scoping Ruling for that OIR has not yet been issued, the Load ICA workplan should consider any related scope items adopted in the HIGH DER OIR Scoping Ruling. Therefore, by February 2022, the IOUs shall develop their respective workplans that address their timeline and milestones to implement the modeling changes listed above. This workplan shall be included in the February 2022 report on the review the ICA and the GNA assumptions and methodologies. With this, the plan moves important Load ICA development forward, but acknowledges that the HIGH DER OIR scope may further refine this workplan.

IT IS SO RULED that:

1. The Investor-owned Utilities shall review the Integration Capacity Analysis and the Grid Needs Assessment assumptions and methodologies to provide the Commission and parties with a report by February 2022, that discusses whether alignment of such assumptions and methodologies could improve Integration Capacity Analysis results. This report shall provide an updated Uniform Load Integration Capacity Analysis method summary that identifies any new data validation methods and propose methods (including quantitative metrics) to develop descriptions of Load Integration Capacity Analysis accuracy.
2. Beginning in in the 4th Quarter of 2022, the Investor-owned Utilities shall submit an “Integration Capacity Analysis Refinements Annual Report” that covers the topic categories set forth above in Section 2.2. of this *Ruling*.

3. Each Investor-owned Utilities shall implement their respective modifications set forth in Section 2.3 of this *Ruling* within 120 days of this *Ruling*.
4. The Investor-owned Utilities shall begin adopting the modeling changes to the Load Integration Capacity Analysis as set forth above in Section 2.4 of this *Ruling*.

Dated September 9, 2021, at San Francisco, California.

/s/ ROBERT M. MASON III

Robert M. Mason III
Administrative Law Judge